

Title (en)

METHOD AND APPARATUS TO INCREASE RADAR RANGE

Title (de)

VERFAHREN UND VORRICHTUNG ZUR VERGRÖSSERUNG DER RADARREICHWEITE

Title (fr)

PROCÉDÉ ET APPAREIL PERMETTANT D'AUGMENTER UNE PORTÉE DE RADAR

Publication

EP 4172645 A1 20230503 (EN)

Application

EP 21832825 A 20210322

Priority

- US 202063045674 P 20200629
- US 202117207470 A 20210319
- US 2021023510 W 20210322

Abstract (en)

[origin: WO2022005542A1] An integrated radar circuit comprising: a first substrate, of a first semiconductor material, said first substrate comprising an integrated transmit and receive radar circuit; a second substrate, of a second semiconductor material, said second substrate comprising at least one through-substrate cavity having cavity walls; at least one discrete transistor chip, of a third semiconductor material, said at least one discrete transistor chip having chip walls and being held in said at least one through-substrate cavity by a metal filling extending from at least one cavity wall to at least one chip wall; a conductor on said second substrate, electrically connecting a portion of said integrated transmit and receive radar circuit to a discrete transistor on said at least one discrete transistor chip.

IPC 8 full level

G01S 7/03 (2006.01); **G01S 7/28** (2006.01); **H01L 23/538** (2006.01); **H01L 23/66** (2006.01)

CPC (source: EP)

G01S 7/032 (2013.01); **H01L 21/568** (2013.01); **H01L 23/66** (2013.01); **H01L 24/18** (2013.01); **H01L 24/24** (2013.01); **H01L 25/0655** (2013.01);
H01L 25/18 (2013.01); **H01Q 1/2283** (2013.01); **H01Q 1/3233** (2013.01); **H01Q 23/00** (2013.01); **H01L 23/3677** (2013.01);
H01L 2223/6644 (2013.01); **H01L 2223/6677** (2013.01); **H01L 2224/16225** (2013.01)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

WO 2022005542 A1 20220106; CN 115698748 A 20230203; CN 115698748 B 20231003; EP 4172645 A1 20230503; EP 4172645 A4 20240710

DOCDB simple family (application)

US 2021023510 W 20210322; CN 202180042161 A 20210322; EP 21832825 A 20210322